

Proj	ect Number:	160961352		Date	:	ŀ	April 4, 2017			
Staf	f Name:	Uskov, Faiella		Time	:	(9:39			
Rea	ch ID (use map):	1		Weat	ther (current):	(Dvercast,			
	b)Watershed:				fall (72 hours prior):					
(Sui)watersneu.	Uppers Quarry	(Thorold.	Ναιτι	iaii (72 nouis prior).					
Loca	ation:	ON)	(,							
	w Condition	<i></i>		_						
	No Surface Water	(dry)			Surface Flow Minin		. ,			
	Standing Water	hourfood water in	the voide of e		Surface Flow Subs	tai	itiai (>0.5 I/S)			
	Interstitial Flow (subsurface water in the voids of a coarse substrate)									
Fea	ture Type									
	Defined Natural Cl	hannel			Wetland					
	Channelized			Online pond outlet						
	Multi-Thread (>1 C	,		Roadside Ditch						
\boxtimes	No Defined Featur	-			Tiled Drainage					
\boxtimes	Swale (a shallow tro	ough-like depression	on that carries	water	mainly during rainstor	ms	or snow melts)			
Ripa	arian Classification	ı					10			
	0m-1.5m None		1.t None	5m-10	um _	7	10m-30m None			
	Lawn		Lawn			L L	Lawn			
_	Cropped Land		Cropped La	and		-	Cropped Land			
\square	Meadow		Meadow	anu			Meadow			
	Scrubland / Thicke	↓	Scrubland	/ Thio		_	Scrubland / Thicket			
				/ THC		_				
	Forest		Forest				Forest			

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

Upstream section traverses through a mix of manicured grass and a pasture like area. This area has no defined feature and flows appear surficial from recent rains. Substrate is mainly grass, with some deposited silt. Water flows north through a 0.5 m plastic corrugated pipe under Uppers Lane. The feature becomes wider with minor definition but continues to exhibit shallow, swale-like features. The swale is cropped through. The swale is in a flooded state due to recent and ongoing heavy rains with moderate flows of approximately 0.3 m/s. Average wetted width in the downstream section is 0.85 m and feature width is 0.95 on average. Water depths are approximately 10.5 cm and substrate is made up of mainly clay with lesser amounts of silt and sand.



Photos:	3206, 32	205, 3220	, 3224				



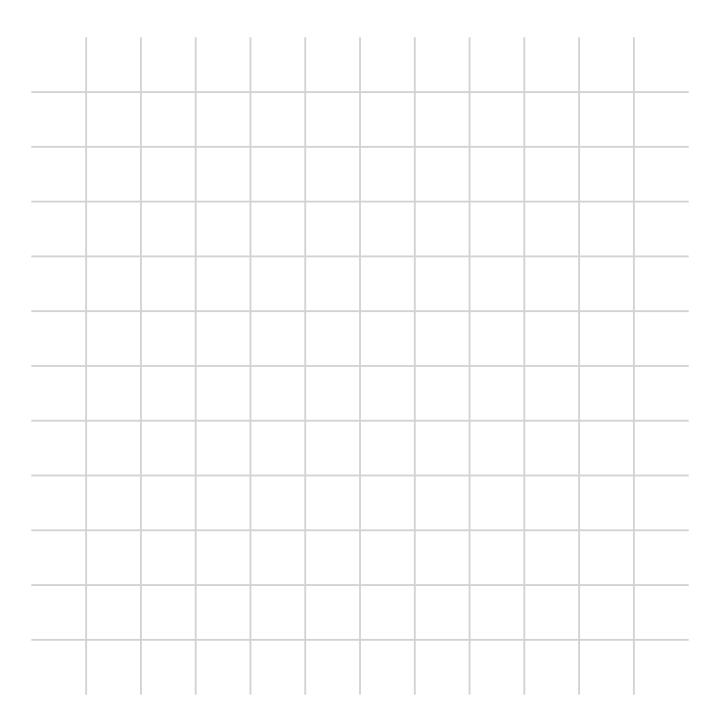
Project Number: Staff Name: Reach ID (use map): (Sub)Watershed:		Uppers Quarry	Rain	-	April 4, 2017 10:19 Overcast
	w Condition No Surface Water Standing Water Interstitial Flow (su		⊠ ⊡ the voids of a coarse	Surface Flow Minim Surface Flow Subst substrate)	. ,
Fea	ture Type Defined Natural Cl Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tro	Channel) re	D D D D D D D D D	Wetland Online pond outlet Roadside Ditch Tiled Drainage mainly during rainstor	ms or snow melts)
Rip : □ □ □	arian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest		Lawn Cropped Land Meadow Scrubland / Thicket

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

No defined banks observed at the upstream section of this reach. Minor flows observed throughout. Substrate is comprised of clay and silt with lesser amounts of sand. Could not measure upstream wetted and feature width due to lack of definition. Reach became more defined in the downstream section near the property line to the north due to surficial runoff from agricultural field. Flows increased in the downstream section (~0.10 m/S). Wetted width is 0.5 m wide and feature width is 0.75 m wide.



Photos: 3231, 3234, 3235





Project Number: Staff Name: Reach ID (use map): (Sub)Watershed:		Uppers Quarry	Hime: Weather (current): Rainfall (72 hours prior):		April 4, 2017 10:20 Overcast,						
Flov	 Standing Water Surface Flow Substantial (>0.5 l/s) Interstitial Flow (subsurface water in the voids of a coarse substrate) 										
Feat	□ Multi-Thread (>1 Channel) □ Roadside Ditch ☑ No Defined Feature □ Tiled Drainage										
Rip : □ □ □	arian Classificatior 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest								

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

No defined feature found in the upstream section. Minor surficial flows (~ 0.08 m/s) through a planted agricultural field. Water depths ranged from 0.05 to 0.08 m. Substrate is comprised mainly of clay, with lesser amounts of silt and sand. Feature becomes a poorly defined swale downstream, in which the landowner has attempted to plant. Feature is experiencing erosion due to increased water velocity and becomes more defined. Average wetted width in the downstream section is 1.0 m and feature width is approximately 1.15 m. Water depth is approximately 0.15 m. Substrate is comprised of mainly clay, sand and silt.



Photos: 3226, 3232, 3238, 3242





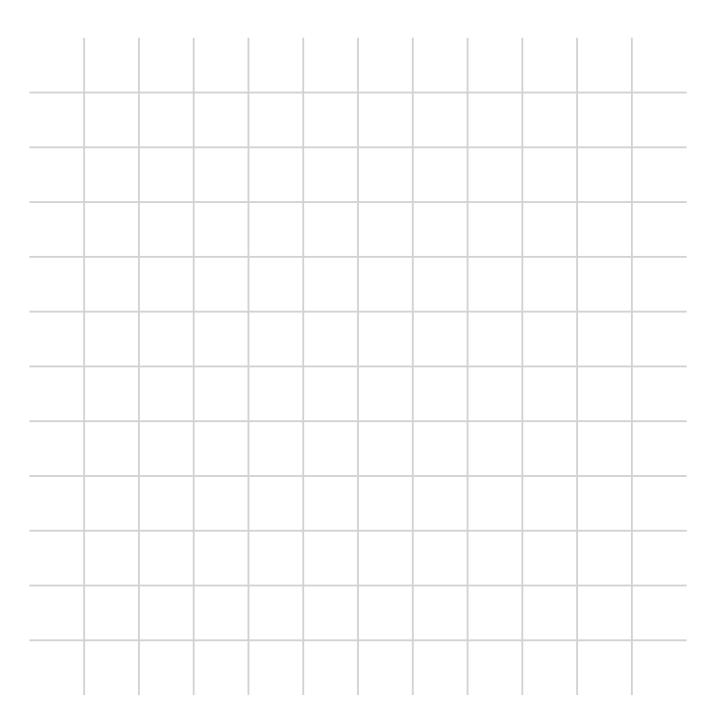
Project Number: Staff Name: Uskov, Fa Reach ID (use map): (Sub)Watershed:		Uppers Quarry	Date: Time: Weather (current): Rainfall (72 hours prior): (Thorold,		April 4, 2017 11:04 Overcast,			
Flov	v Condition No Surface Water Standing Water Interstitial Flow (su		⊠ □ the voids of a coarse	Surface Flow Minim Surface Flow Subst substrate)	,			
Feat	 Channelized Multi-Thread (>1 Channel) No Defined Feature Tiled Drainage 							
Rip a □ □ □	arian Classificatior 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-1(None Lawn Cropped Land Meadow Scrubland / Thic Forest		Cropped Land Meadow Scrubland / Thicket			

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

The survey started at the upstream section near an active farm and presumed pasture. It appears to originate in a large, pooled area of standing water due to runoff. No defined feature located. Very minimal flows observed in this area. Traversing northwest, the feature exhibits swale-like characteristics. Average wetted width ranges from 0.075 m to 0.85 m and the feature width ranges from 0.08 m to 1.0 m. Water depth ranges from 0.05 to 0.07 m and water velocity is estimated at 0.05 m/s. Substrate is mainly clay and silt with some patches of sand, gravel and cobble deposited on the surface of the underlying clay.



Photos: 3251-3271





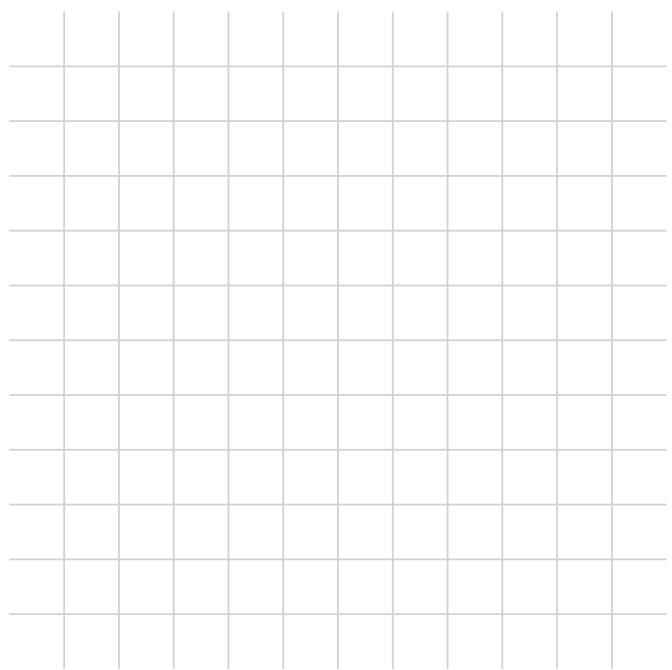
Staff Name: Reach ID (use map): (Sub)Watershed: Location:	Uskov, Faiella 5 Uppers Quarry ON)		_	11:30 Overcast
Flow ConditionNo Surface WaterStanding WaterInterstitial Flow (surface)	,		ace Flow Minima ace Flow Substa strate)	. ,
Feature Type Defined Natural Ch Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow trooped)	Channel) e	□ Onli □ Roa	land ine pond outlet idside Ditch d Drainage ly during rainstorms	s or snow melts)
Riparian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicked		1.5m-10m None Lawn Cropped Land Meadow Scrubland / Thicket		10m-30m None Lawn Cropped Land Meadow Scrubland / Thicket

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

Minor definition of swale through field. The upstream wetted width is approximately 0.5 m wide and the feature width is approximately 0.6 m. Minimal flows. Moving downstream, the feature widens to approximately 0.6 m wetted width and 0.7 feature width. Flows were estimated at 0.04 m/s throughout this feature. Substrate is mostly silt and clay with sparse areas of cobble. The entire swale-like feature traverses through an active agricultural field that the farmer has planted with winter wheat.



Photos: 3272-3280





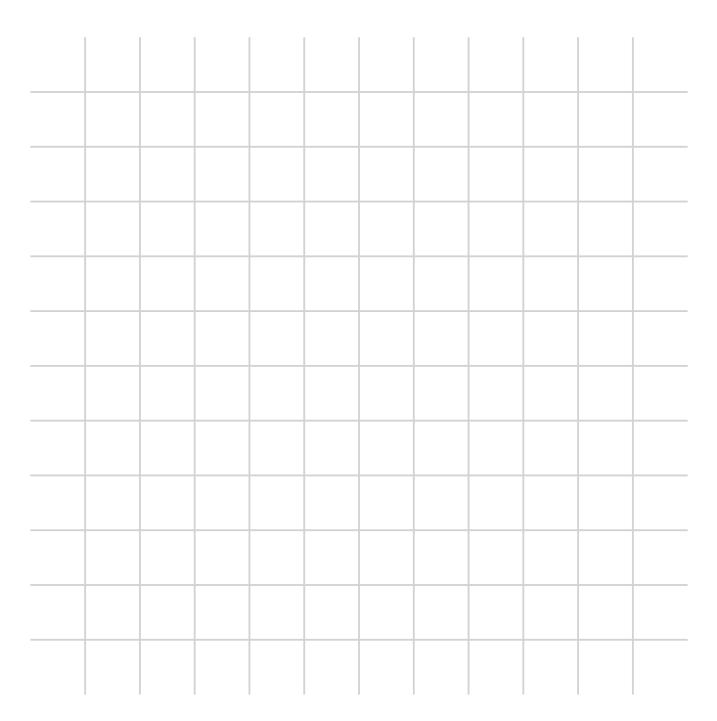
Reach ID (use map): (Sub)Watershed:		160961352 Uskov, Faiella 6 Uppers Quarry ON)	Rainf		April 4, 2017 11:42 Overcast,
	w Condition No Surface Water Standing Water Interstitial Flow (su		⊠ □ he voids of a coarse	Surface Flow Minim Surface Flow Subst substrate)	· · · · · · · · · · · · · · · · · · ·
Fea □ □ □ □ □	ture Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre	Channel) re	un that carries water	Wetland Online pond outlet Roadside Ditch Tiled Drainage mainly during rainstor	ms or snow melts)
	arian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest		Lawn Cropped Land Meadow Scrubland / Thicket

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

In the upstream section of this swale, wetted width ranges from 1.0 m to 1.2 m and feature width ranges from 1.0 m to 1.5 m. Average water depth is 0.13 m and water velocity was estimated at 0.10 m/s. Little definition throughout this feature. Substrate in this feature is comprised mainly of clay with lesser amounts of silt with sparse pockets of cobble. Similar wetted width and feature width consistent between the upstream section and downstream section.



Photos: 3282, 3285, 3289





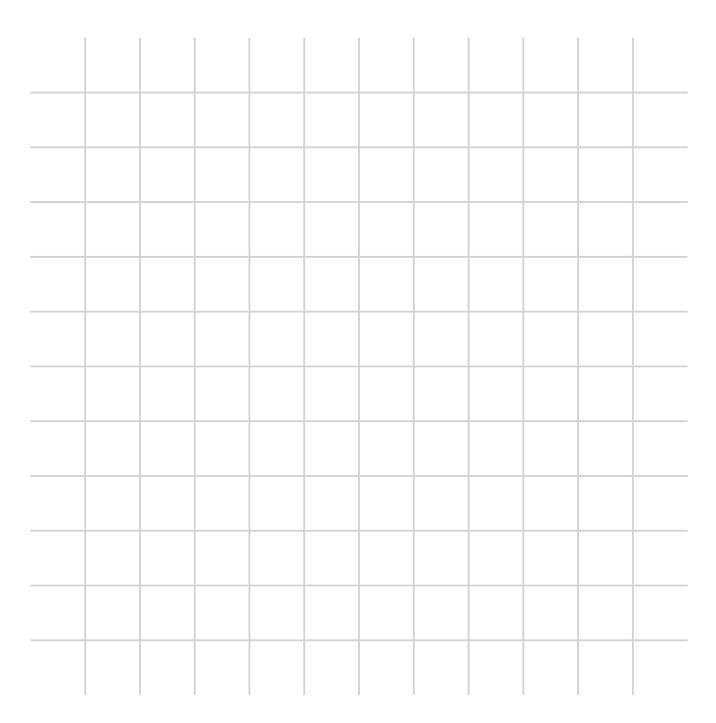
Project Number: Staff Name: Uskov, F Reach ID (use map): (Sub)Watershed:		Uppers Quarry	Weather (current): Rainfall (72 hours prior):		April 4, 2017 13:49 Overcast,						
	□ Standing Water □ Surface Flow Substantial (>0.5 l/s)										
Feature Type Defined Natural Channel Wetland Channelized Online pond outlet Multi-Thread (>1 Channel) Roadside Ditch No Defined Feature Tiled Drainage Swale (a shallow trough-like depression that carries water mainly during rainstorms or snow melts)											
Rip:	arian Classificatior 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest								

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

Feature originates in lands upstream of Thorold Townline Road but the survey started at the road. Minimal flows (0.06 m/s) through a 0.5 m plastic corrugated pipe under Thorold Townline Road. This section flows through a small meadow before traversing through a planted agricultural field. Upstream wetted width ranges from 0.75 m and 0.85 m and feature width ranges from 0.75 m to 0.95 m. The downstream section widens slightly with feature widths ranging from 0.95 m to 1.1 m. Throughout, substrate is comprised mainly of clay and silt with sparse sand and small amounts of cobble.



Photos: 3384, 3386, 3380





Project Number: Staff Name: Reach ID (use map): (Sub)Watershed: Location:	160961352 Uskov, Faiella 8 Uppers Quarry ON)	Rainf		April 4, 2017 12:55 Overcast		
Flow Condition No Surface Water Standing Water Interstitial Flow (set)		⊠ □ he voids of a coarse	Surface Flow Minin Surface Flow Subs substrate)	· · ·		
Feature TypeDefined Natural CChannelizedMulti-Thread (>1 CNo Defined FeatuSwale (a shallow tr	Channel) re	un that carries water	Wetland Online pond outlet Roadside Ditch Tiled Drainage mainly during rainstor			
Riparian Classificatio 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicked Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest		 Cropped Land Meadow Scrubland / Thicket 		
Notes: (include o.a.: wat barriers to fish migration;				ulverts? (measurements);		

The survey started at Thorold Townline Road at a 0.5 m corrugated steel pipe. The upstream section exhibits a swale-like appearance, with very minimal definition, in which the farmer has planted winter wheat. Wetted and feature width ranges from 0.6 m to 0.7 m. Water depth ranges from 0.08 m to 0.10 m and velocities are estimated at 0.06 m/s. This feature gains minimal definition as it drains into the main channel to the southeast.



Photos: 3337, 3339, 3347, 3353

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Project Number: Staff Name: Uskov, F Reach ID (use map): (Sub)Watershed:		Uppers Quarry	Raint		April 4, 2017 13:12 Overcast,			
	v Condition No Surface Water Standing Water Interstitial Flow (su		⊠ □ he voids of a coarse	Surface Flow Minim Surface Flow Subst substrate)				
Fea C C C C C C C C C C C C C	□ Channelized □ Online pond outlet □ Multi-Thread (>1 Channel) □ Roadside Ditch ☑ No Defined Feature □ Tiled Drainage							
Ripa □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	arian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest		Cropped Land Meadow			

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

The upstream section of this feature originates as a ponded area from recent rains. It outflows through a very ill-defined swale feature in a planted agricultural field where wetted width is approximately 0.20 m wide. Minimal velocities observed at the time of the survey. Moving downstream (southeast), the swale gains minimal definition prior to the confluence with the main channel. In the downstream section, wetted width ranges from 0.65 to 0.75 and feature width ranges from 0.75 m to 0.85 m. Throughout, substrate is comprised of silt and clay.



Photos: 3355, 3358, 3363

1					



Proi	ect Number:	160961352	Date	:	April 4, 2017
	f Name:	Uskov, Faiella	Time	:	12:26
	ch ID (use map):	10		her (current):	Overcast,
				· · · ·	
(Sur	b)Watershed:	Uppers Quarry		all (72 hours prior):	
Loca	ation:	ON)	(
_	w Condition	<i>.</i>	_	.	
	No Surface Water Standing Water	(dry)	\boxtimes	Surface Flow Minim	,
				Surface Flow Subst	antiai (>0.5 i/S)
				substrate)	
	ture Type	hannal			
	Defined Natural Cl Channelized	nannei		Wetland Online pond outlet	
	Multi-Thread (>1 C	hannel)		Roadside Ditch	
	No Defined Featur	,		Tiled Drainage	
\square		-		mainly during rainstorr	ns or snow melts)
Ripa	arian Classification	า			
	0m-1.5m	_	1.5m-1()m	10m-30m
	None Lawn		None Lawn		None Lawn
\square	Cropped Land		Cropped Land		
	Meadow		Meadow		
	Scrubland / Thicke		Scrubland / Thic		· · · · · · · · · ·
	Forest		Forest		Forest
	1 01000		1 0/000		101000

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

The survey started at Thorold Townline Road and continued northeast to the main channel. Flow into the subject lands is conveyed through a 0.6 m corrugated plastic culvert. The upstream section is considered a swale that has been cropped through. Minimal flow velocities of approximately 0.10 m/s. Wetted width ranges from 0.85 m to 1.10 m and the feature width ranges from 0.85 m to 1.2 m. Water depth ranges from 0.05 m to 0.11 m. The widest section of this feature is located near the confluence with the main channel which is flooded. Substrate is comprised mainly of silt and clay.



hotos:	3307, 33	09, 3313,	3321				



Proj	ect Number:	160961352	Date	9:	A	April 4, 2017
Staf	f Name:	Uskov, Faiella	Tim	9:	1	2:47
Rea	ch ID (use map):	11		ather (current):	C	Dvercast,
	b)Watershed:			nfall (72 hours prior):		
		Uppers Quarry				
Loca	ation:	ON)				
Flov	w Condition					
	No Surface Water	(dry)	\boxtimes	Surface Flow Minir		. ,
	Standing Water			Surface Flow Subs	star	ntial (>0.5 l/s)
	Interstitial Flow (su	Ibsurface water in t	the voids of a coars	se substrate)		
Feat	ture Type					
\boxtimes	Defined Natural Cl	hannel		Wetland		
	Channelized			Online pond outlet	t	
	Multi-Thread (>1 C	Channel)		Roadside Ditch		
	No Defined Featur	е		Tiled Drainage		
\boxtimes	Swale (a shallow tro	ough-like depressio	on that carries wate	r mainly during rainsto	rms	or snow melts)
Ripa	arian Classificatior	.				
	0m-1.5m		1.5m-1	0m		10m-30m
	None		None	E		None
	Lawn		Lawn	Γ		Lawn
	Cropped Land	\boxtimes	Cropped Land	\geq	\times	Cropped Land
	Meadow		Meadow	-		Meadow
	Scrubland / Thicke	et 🗆	Scrubland / Thi	cket		Scrubland / Thicket
\boxtimes	Forest		Forest	Γ		Forest

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

Flow is generated on lands to the west of Thorold Townline Road. The upstream section of the survey starts in a hardwood woodlot at Thorold Townline Road. The feature in the upstream section is approximately 0.53 m wide (wetted width) with a feature width of 1.75 m. Water depths ranged from 0.05 to 0.7 m with water velocities estimated at 0.07 m/s. Moving downstream, the feature is an unvegetated swale that has been cropped through with an average wetted width of 1.0 m. Substrate is comprised of silt and clay.



Photos: 3335, 3332, 3326

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Staf Rea (Sul	ect Number: f Name: ich ID (use map): o)Watershed: ation:	160961352 Uskov, Faiella 12 Uppers Quarry ON)	Rain		April 4, 2017 13:44 Overcast
	w Condition No Surface Water Standing Water Interstitial Flow (su		⊠ ⊡ he voids of a coarse	Surface Flow Minin Surface Flow Subs substrate)	. ,
Fea □ □ □ □ □	ture Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre	Channel) re	⊠ □ □ □ on that carries water	Wetland Online pond outlet Roadside Ditch Tiled Drainage mainly during rainstor	ms or snow melts)
Rip:	arian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1.5m-10 None Lawn Cropped Land Meadow Scrubland / Thic Forest		Lawn Cropped Land Meadow Scrubland / Thicket

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

This feature originates from a wetland feature in the southwest area of the subject lands. The riparian vegetation is scrubland/meadow species and the swale has moderate definition. Average wetted width is approximately 0.5 m with water depth ranging from 0.05 m to 0.08 m. Moving downstream (north), the feature becomes a cropped swale with no definition with wetted widths ranging from 0.75 m to 0.85 m and depths ranging from 0.05 m to 0.07 m. Substrate is comprised mainly of silt and clay.



Photos: 3371, 3373, 3376

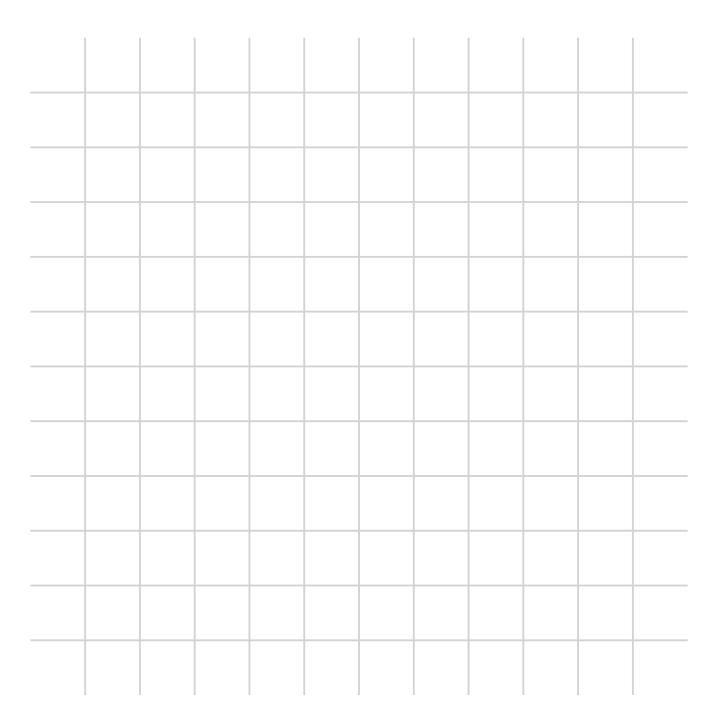


Project Number: Staff Name: Reach ID (use map): (Sub)Watershed: Location:	160961352 Uskov, Faiella 13 Uppers Quarry (Thorold, ON)		e: e: ather (current): afall (72 hours prior):	April 4, 2017 14:22 Overcast,		
Flow Condition No Surface Wate Standing Water Interstitial Flow (standard)	r (dry) ubsurface water in t	⊠ □ he voids of a coars	Surface Flow Minir Surface Flow Subs e substrate)			
Feature Type Defined Natural O Channelized Multi-Thread (>1 No Defined Feature Swale (a shallow to the sh	Channel) Ire	□ □ □ □ □ □	Wetland Online pond outlet Roadside Ditch Tiled Drainage r mainly during rainstor			
Riparian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thick Forest		1.5m-1 None Lawn Cropped Land Meadow Scrubland / Thi Forest		 Lawn Cropped Land Meadow Scrubland / Thicket 		
barriers to fish migration;	seeps; ponds; amp	hibians; terrestrial	crayfish; etc.)	ulverts? (measurements);		

into the feature. The entire reach is considered a cropped swale with minimal definition. The feature is 0.9 m wide and water depth is 0.07 m. Velocity is estimated at 0.05 m/s. Substrate is clay and silt with some sparse gravel overlying the clay surface.



Photos: 3388, 3390, 3391





Staf Rea (Sul	ect Number: f Name: ch ID (use map): b)Watershed: ation:	160961352 Burnett, Faiella 14 Uppers Quarry (Thorold, ON)		-			April 9, 2021 10:25 Sun, cloud		
Flov	v Condition No Surface Water Standing Water Interstitial Flow (su	,	he voids of a	□ □ a coarse	Surface Flow Minir Surface Flow Subs substrate)		()		
Fea □ □ □	ture Type Defined Natural Cl Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre	Channel) e	on that carries	 Wetland Online pond outlet Roadside Ditch Tiled Drainage ries water mainly during rainstorms or snow melts) 					
Rip : □ □ □	arian Classification 0m-1.5m None Lawn Cropped Land Meadow Scrubland / Thicke Forest		1 None Lawn Cropped I Meadow Scrublanc Forest				10m-30m None Lawn Cropped Land Meadow Scrubland / Thicket Forest		
	es: (include o.a.: <i>wate</i> iers to fish migration; s				ulv	erts? (measurements);			

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The feature is 0.15 m wide and has been recently tilled and will most likely be planted. The substrate is comprised of silt and clay. One small section of standing water associated with the main channel was observed during the survey.



Photos: Photos of this feature are saved in a geo referenced format in the Stantec Arc GIS platform.

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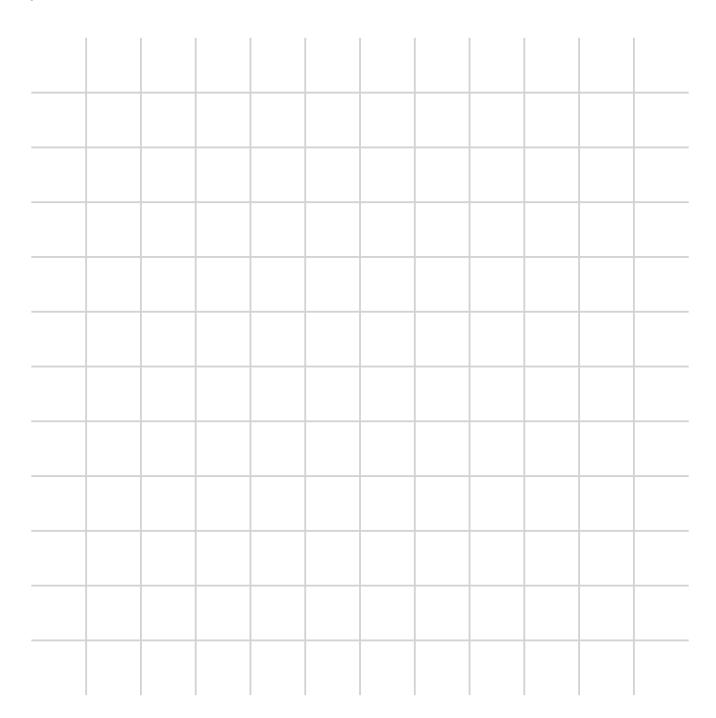


ach ID (use map): b)Watershed:	160961352 Burnett, Faiella 15 Uppers Quarry (Thorold, ON)		eath	. ,	April 9, 2021 10:51 Sun, cloud				
No Surface Water Standing Water	,	the voids of a coal] ;	Surface Flow Subs		· · · · ·			
Defined Natural C Channelized Multi-Thread (>1 (No Defined Featu	Channel) re			Online pond outlet Roadside Ditch Tiled Drainage	Ditch nage				
	n	1 5m-	.10r	n		10m-30m			
None		None	101			None			
		Lawn				Lawn			
Lawn				N	-				
Cropped Land	\boxtimes	Cropped Land	1		3	Cropped Land			
		Cropped Land Meadow Scrubland / Th		Ē]	Cropped Land Meadow Scrubland / Thicket			
	Standing Water Interstitial Flow (su ature Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featu Swale (a shallow tr arian Classificatio 0m-1.5m	ach ID (use map): 15 b)Watershed: Uppers Quarry bittershed: Uppers Quarry bach ID (use map): 0N) b)Watershed: Uppers Quarry bach ID (use map): 0N) b)Watershed: Uppers Quarry bach ID (use map): 0N) w Condition 0N) standing Water Interstitial Flow (subsurface water in the state of the s	ach ID (use map): 15 ach ID (use map): 15 b)Watershed: Ra Uppers Quarry (Thorold, ON) w Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in the voids of a coal ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature Swale (a shallow trough-like depression that carries water arian Classification 0m-1.5m 1.5m	Image: 15 ach ID (use map): 15 b)Watershed: Rainfa Uppers Quarry (Thorold, ON) Rainfa ation: ON) w Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in the voids of a coarse ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature Swale (a shallow trough-like depression that carries water residue) arian Classification 0m-1.5m 1.5m-10r	Imme: Imme: ach ID (use map): 15 weather (current): b)Watershed: Uppers Quarry (Thorold, wation: ON) w Condition No Surface Water (dry) Surface Flow Minir Standing Water Interstitial Flow (subsurface water in the voids of a coarse substrate) ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature Swale (a shallow trough-like depression that carries water mainly during rainstor arian Classification 0m-1.5m 1.5m-10m	Image: Image: ach ID (use map): 15 b)Watershed: Weather (current): b)Watershed: Uppers Quarry (Thorold, ation: ON) w Condition No Surface Water (dry) Surface Flow Minima Standing Water Interstitial Flow (subsurface water in the voids of a coarse substrate) ture Type Defined Natural Channel Multi-Thread (>1 Channel) No Defined Feature Swale (a shallow trough-like depression that carries water mainly during rainstorms arian Classification 0m-1.5m 1.5m-10m			

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans. Substrate is silt and clay.



Photos: Photos of this feature are saved in a geo referenced format in the Stantec Arc GIS platform.





ach ID (use map): b)Watershed:	160961352 Burnett, Faiella 16 Uppers Quarry (Thorold, ON)		eather (current):		April 9, 2021 11:00 Sun, cloud			
No Surface Water Standing Water			Surface Flow Subs		· · ·			
	hannel			line pond outlet adside Ditch				
Multi-Thread (>1 (No Defined Featu	re	ا مn that carries wa		rms	or snow melts)			
Multi-Thread (>1 (No Defined Featu Swale (a shallow tr arian Classificatio	re ough-like depressic	n that carries wa	Tiled Drainage ter mainly during rainsto	rms				
Multi-Thread (>1 (No Defined Featu Swale (a shallow tr	re ough-like depressic	-	Tiled Drainage ter mainly during rainsto	rms	s or snow melts) 10m-30m None			
Multi-Thread (>1 (No Defined Featu Swale (a shallow tr arian Classificatio 0m-1.5m None Lawn	re ough-like depressic n	n that carries wa 1.5m - None Lawn	Tiled Drainage ter mainly during rainston	rms	10m-30m None Lawn			
Multi-Thread (>1 (No Defined Featu Swale (a shallow tr arian Classificatio 0m-1.5m None Lawn Cropped Land	n n	n that carries wa 1.5m - None Lawn Cropped Lanc	Tiled Drainage ter mainly during rainston		10m-30m None Lawn Cropped Land			
Multi-Thread (>1 (No Defined Featu Swale (a shallow tr arian Classificatio 0m-1.5m None Lawn	n n n	n that carries wa 1.5m - None Lawn	Tiled Drainage ter mainly during rainston 10m		10m-30m None Lawn			
	ff Name: ach ID (use map): b)Watershed: ation: w Condition No Surface Water Standing Water Interstitial Flow (su	ff Name: ach ID (use map): b)Watershed: ation: W Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in t ture Type Defined Natural Channel	Burnett, Faiella Tir ach ID (use map): 16 We b)Watershed: Ra ation: Uppers Quarry (Thorold, oN) ON w Condition ON w Condition Interstitial Flow (subsurface water in the voids of a coa ture Type Defined Natural Channel	If Name: Burnett, Faiella Time: ach ID (use map): 16 Weather (current): b)Watershed: Uppers Quarry (Thorold, Rainfall (72 hours prior): ation: ON) ON w Condition ON Surface Flow Mining Standing Water Surface Flow Subs Interstitial Flow (subsurface water in the voids of a coarse substrate) Wetland	If Name: Burnett, Faiella Time: Image: Constraint of the second se			

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soy beans. Substrate is silt and clay.



Photos: Photos of this feature are saved in a geo referenced format in the Stantec Arc GIS platform.

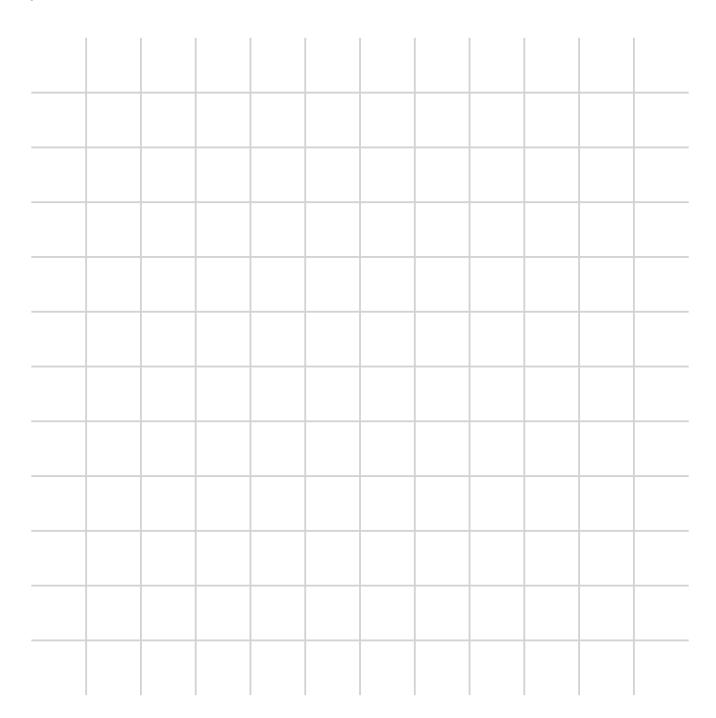


Project Number: Staff Name: Reach ID (use map): (Sub)Watershed: Location:		160961352 Burnett, Faiella 17 Uppers Quarry (Thorold, ON)		Date: Time: Weather (current): Rainfall (72 hours prior):			April 9, 2021 11:00 Sun, cloud		
Flo × □	w Condition No Surface Water Standing Water Interstitial Flow (su		the voids of a	Coarse	Surface Flow Mini Surface Flow Sub e substrate)				
Fea	ture Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre	Channel) re	on that carries	□ □ □ s water	Wetland Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto		s or snow melts)		
	Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification	Channel) re ough-like depressio		s water	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto				
	Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre	Channel) re ough-like depressio			Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto		s or snow melts) 10m-30m None		
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn	Channel) re ough-like depressio n	1. None Lawn	5 m-10	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto		10m-30m None Lawn		
Rip	Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn Cropped Land	Channel) re bugh-like depressio n n	1. None Lawn Cropped L	5 m-10	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto		10m-30m None Lawn Cropped Land		
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn	Channel) re bugh-like depressio n n 	1. None Lawn	5 m-10	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto	rm:	10m-30m None Lawn		

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans near Beechwood Road. Substrate is silt and clay.



Photos: Photos of this feature are saved in a geo referenced format in the Stantec Arc GIS platform.





Project Number:		160961352 Burnett, Faiella 18 Uppers Quarry (Thorold, ON)		Date: Time: Weather (current): Rainfall (72 hours prior):			April 9, 2021 11:00 Sun, cloud		
Flo [®]	v Condition No Surface Water Standing Water Interstitial Flow (su		he voids of a c	□ □ coarse	Surface Flow Mini Surface Flow Subsets substrate)		. ,		
	ture Type Defined Natural C	hannel			Wetland				
	Channelized Multi-Thread (>1 C No Defined Feature	Channel) re	on that carries v	u u water	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto		s or snow melts)		
	Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification	Channel) re ough-like depressio			Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto				
	Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow the	Channel) re ough-like depressio		 water	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto		s or snow melts) 10m-30m None		
□ □ ■ ■ ■ ■	Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn	Channel) re ough-like depressio n	1.5r None Lawn	m-10	Online pond outle Roadside Ditch Tiled Drainage mainly during rainsto	rm	10m-30m None Lawn		
□ □ □ □ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn Cropped Land	Channel) re ough-like depressio n n	1.5 None Lawn Cropped La	m-10	Online pond outler Roadside Ditch Tiled Drainage mainly during rainsto		10m-30m None Lawn Cropped Land		
□ □ ■ ■ ■	Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn	Channel) re ough-like depressio n n	1.5r None Lawn	m-10 Ind	Online pond outler Roadside Ditch Tiled Drainage mainly during rainsto	rm	10m-30m None Lawn		

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans. Substrate is silt and clay. A 0.4 m plastic corrugated culvert is located at Uppers Lane.



Photos: Photos of this feature are saved in a geo referenced format in the Stantec Arc GIS platform.

	1	1				



Staf Rea (Sul	ect Number: f Name: ich ID (use map): b)Watershed: ation:	160961352 Burnett, Faiella 19 Uppers Quarry ON)	We		· ·	April 9, 2021 11:47 Sun, cloud
	w Condition No Surface Water Standing Water Interstitial Flow (su		□ □ he voids of a coar	Surface F		al (<0.5 l/s) antial (>0.5 l/s)
Fea	ture Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tr	Channel) re	on that carries wate	Wetland Online pc Roadside Tiled Dra rr mainly duri	e Ditch inage	ns or snow melts)
Rip:	arian Classificatio 0m-1.5m None	n 🗆	1.5m- None	0m		10m-30m None
	Lawn Cropped Land Meadow Scrubland / Thicke	_	Lawn Cropped Land Meadow Scrubland / Th	cket		Lawn Cropped Land Meadow Scrubland / Thicket
Not	Forest	er & air temp.; defir	Forest	e width; wette	ed width; cu	Forest

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans. Substrate is silt and clay.





Sta Rea (Su	ject Number: ff Name: ach ID (use map): b)Watershed: ation:	160961352 Burnett, Faiella 20 Uppers Quarry ON)	Weat		April 9, 2021 12:25 Sun, cloud
Flo ×	w Condition No Surface Water Standing Water Interstitial Flow (su		□ □ he voids of a coarse	Surface Flow Minin Surface Flow Subs substrate)	. ,
Fea	ture Type Defined Natural C	hannel		Wetland	
	Channelized Multi-Thread (>1 (No Defined Featur Swale (a shallow tre	re	⊔ □ □ n that carries water	Online pond outlet Roadside Ditch Tiled Drainage mainly during rainstor	ns or snow melts)
	Multi-Thread (>1 C No Defined Feature	e ough-like depressio		Roadside Ditch Tiled Drainage mainly during rainstor	ns or snow melts) 10m-30m
□ □ ■ ■ ■	Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None	e ough-like depressio	n that carries water 1.5m-10 None	Roadside Ditch Tiled Drainage mainly during rainstor	10m-30m None
□ □ ■ ■ ■	Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn	n n	n that carries water 1.5m-10 None Lawn	Roadside Ditch Tiled Drainage mainly during rainstorn m	10m-30m None Lawn
□ □ ∞ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn Cropped Land	re bugh-like depression n 	n that carries water 1.5m-10 None Lawn Cropped Land	Roadside Ditch Tiled Drainage mainly during rainstorn m	10m-30m None Lawn Cropped Land
□ □ ■ ■ ■	Multi-Thread (>1 C No Defined Featur Swale (a shallow tre arian Classification 0m-1.5m None Lawn	re bugh-like depression n 	n that carries water 1.5m-10 None Lawn	Roadside Ditch Tiled Drainage mainly during rainstorn m	10m-30m None Lawn Cropped Land Meadow

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans. Substrate is silt and clay.





ect Number: f Name: nch ID (use map): p)Watershed: ation:	160961352 Burnett, Faiella 21 Uppers Quarry ON)	Weathe	April 9, 2021 12:45 Sun, cloud	
Standing Water			Surface Flow Subst	· /
Channelized Multi-Thread (>1 (No Defined Feature	Channel) re	C F T	Online pond outlet Roadside Ditch Tiled Drainage	ns or snow melts)
arian Classificatio 0m-1.5m	n	1.5m-10m	1	10m-30m
arian Classificatio 0m-1.5m None	n	1.5m-10 m None	1	10m-30m None
0m-1.5m None Lawn	_	None Lawn		None Lawn
0m-1.5m None Lawn Cropped Land		None Lawn Cropped Land		None Lawn Cropped Land
0m-1.5m None Lawn		None Lawn		None Lawn Cropped Land Meadow
	ch ID (use map): b)Watershed: ation: v Condition No Surface Water Standing Water Interstitial Flow (su ture Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Feature	ch ID (use map): 21 b)Watershed: uppers Quarry ON) v Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in t ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature	ch ID (use map): 21 b)Watershed: Rainfal uppers Quarry (Thorold, ON) 0 ation: ON) v Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in the voids of a coarse s ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature	ch ID (use map): 21 b)Watershed: Rainfall (72 hours prior): b)Watershed: Uppers Quarry (Thorold, ON) v Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in the voids of a coarse substrate) ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) Weather (current): Rainfall (72 hours prior): Rainfall (72 hours prior): Rainfall (72 hours prior): Particular Channel Weather (dry) Rainfall (72 hours prior): Rainfall (72 hours prior): Rainfall (72 hours prior):

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans. Substrate is silt and clay.

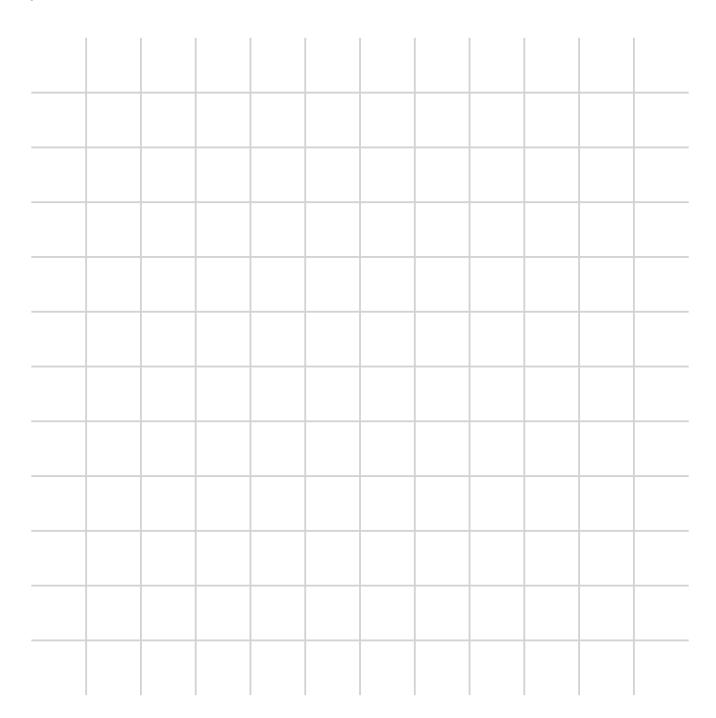




	160961352 Burnett, Faiell 22 Uppers Quarry ON)	a Time: 12 Weather (current): Su Rainfall (72 hours prior):				April 9, 2021 12:42 Sun, cloud
No Surface Water Standing Water		the voids of a	Coarse	Surface Flow Sub		. ,
Defined Natural C Channelized Multi-Thread (>1 C No Defined Feature	Channel) re	on that carries	U U S water	Roadside Ditch Tiled Drainage		s or snow melts)
	า	1.	5m-1(Im		10m-30m
None		None				None
Lawn		Lawn				Lawn
Cropped Land	\boxtimes	Cropped L	and.		\boxtimes	Cropped Land
		Meadow		1		Meadow Scrubland / Thicket
Meadow Scrubland / Thicke		Scrubland	/ Th:-		\square	
	a)Watershed: ation: A Condition No Surface Water Standing Water Interstitial Flow (su A Condition No Surface Water Standing Water Interstitial Flow (su Channelized Multi-Thread (>1 C No Defined Featur Swale (a shallow tro Om-1.5m	ch ID (use map):)Watershed: Uppers Quarry ON) v Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in vure Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature Swale (a shallow trough-like depressi vrian Classification 0m-1.5m	ch ID (use map):)Watershed: Uppers Quarry (Thorold, ON) / Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in the voids of a // Condition No Surface Water (dry) Standing Water Interstitial Flow (subsurface water in the voids of a // Condition // C	weat Weat	weather (current): weather (current): weather (current): weather (current): Watershed: Uppers Quarry (Thorold, ution: ON v Condition No Surface Water (dry) Surface Flow Min Standing Water Interstitial Flow (subsurface water in the voids of a coarse substrate) vure Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature Swale (a shallow trough-like depression that carries water mainly during rainstee value (a shallow trough-like depression that carries water mainly during rainstee	weather (current): No Surface Water (dry) Surface Flow Minima Standing Water Interstitial Flow (subsurface water in the voids of a coarse substrate) weather type Defined Natural Channel Weather (current): Weather (current): Weather (dry) Weather (dry) Surface Flow Minima Surface Flow Substa Interstitial Flow (subsurface water in the voids of a coarse substrate) Weather type Defined Natural Channel Weather (current): Surface Flow Minima Weather (current): Weather (c

This feature is considered an agricultural swale with no defined banks that conveys water during spring runoff. The swale has been tilled and has previously been planted with soybeans. Substrate is silt and clay.







Staf Rea (Sul	ect Number: f Name: ich ID (use map): o)Watershed: ation:	160961352 Burnett, Faiella 23 Uppers Quarry ON)	" Ti W Ri	Date: Fime: Weather (current): Rainfall (72 hours prior):			April 9, 2021 13:04 Sun, cloud
	w Condition No Surface Water Standing Water Interstitial Flow (su		[]] arse	Surface Flow Minin Surface Flow Subs substrate)		. ,
Fea	ture Type Defined Natural C Channelized Multi-Thread (>1 (No Defined Featu Swale (a shallow tr	Channel) re		□ □ □ ater	Wetland Online pond outlet Roadside Ditch Tiled Drainage mainly during rainsto		s or snow melts)
Ripa	arian Classificatio 0m-1.5m	n	1.5m	n-10	m		10m-30m
	None		None		_		None
	Lawn		Lawn		Γ		Lawn
	Cropped Land		Cropped Lan	nd	-		Cropped Land
\square	Meadow		Meadow	[]	E	3	Meadow
	Scrubland / Thicke Forest	et ⊠	Scrubland / T Forest	INIC	_	3	Scrubland / Thicket Forest
						_	
	es: (include o.a.: wat iers to fish migration;					ulv	rerts? (measurements);

Feature is outside of project lands but conveys flow to Feature 11. Feature is dry. A 0.5 m corrugated steel pipe is located at the road and conveys feature drainage as well as roadside ditch drainage. The east side culvert opening is dry and the west side of the culvert has a very small, shallow pool of standing water.



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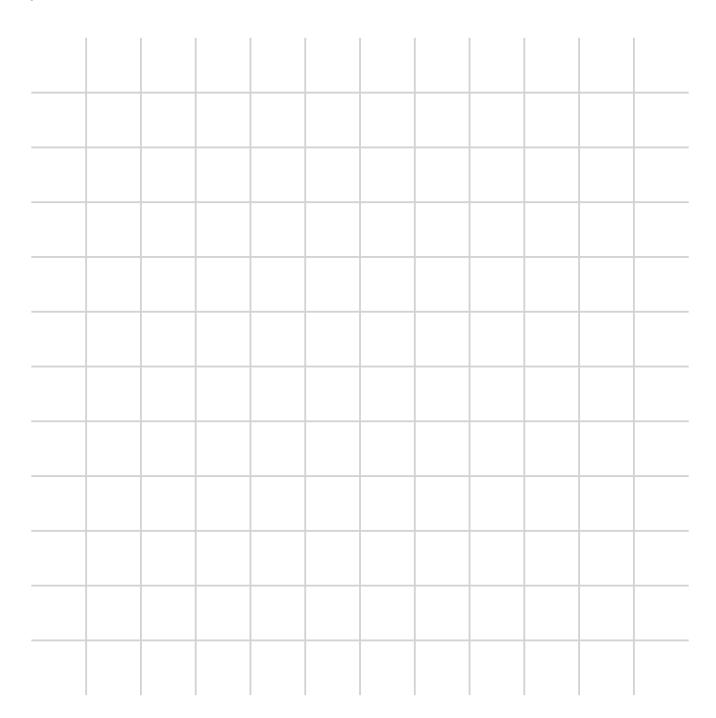


Sta Rea (Su	ject Number: ff Name: ach ID (use map): b)Watershed: ation:	160961352 Burnett, Faiella 24 Uppers Quarry ON)	Date: Time: Weather (current): Rainfall (72 hours prior): (Thorold,			April 9, 2021 13:20 Sun, cloud
Flo ⊠ □	w Condition No Surface Water Standing Water Interstitial Flow (su		□ □ he voids of a coars	Surface Flow Mir Surface Flow Sul e substrate)		· · ·
Fea 	ature Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featu Swale (a shallow tr	Channel) re	on that carries wate	Wetland Online pond outle Roadside Ditch Tiled Drainage r mainly during rainst		s or snow melts)
Rip	arian Classificatio 0m-1.5m	n	1.5m-1	0m		10m-30m
	None		None			None
	Lawn		Lawn Cropped Land			Lawn Cropped Land
	Cropped Land		••		\boxtimes	Meadow
_		\boxtimes	Meadow Scrubland / Thi	cket		Meadow Scrubland / Thicket

Notes: (include o.a.: water & air temp.; defined banks?; feature width; wetted width; culverts? (measurements); barriers to fish migration; seeps; ponds; amphibians; terrestrial crayfish; etc.)

This feature was surveyed at the southwest corner of the property. It is considered a meadow swale that was dry during the survey. No defined banks were observed. Grassed throughout feature. The roadside ditch was dry during the survey.





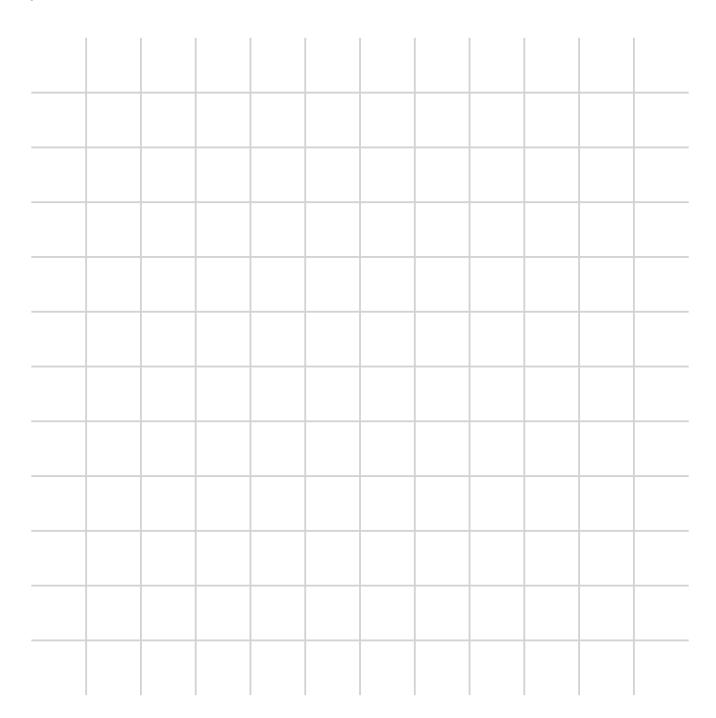


ach ID (use map): b)Watershed:	160961352 Burnett, Faiell 25 Uppers Quarry ON)	Time Weat Raint	: ther (current):	1	April 9, 2021 3:42 Sun, cloud
No Surface Water Standing Water		the voids of a coarse	Surface Flow Subs		· /
Defined Natural C Channelized Multi-Thread (>1 (No Defined Featu	Channel) re	⊠ □ □ on that carries water	Roadside Ditch Tiled Drainage		or snow melts)
arian Classificatio 0m-1.5m	n	1.5m-10)m		10m-30m
arian Classificatio 0m-1.5m None	n	1.5m-10 None			10m-30m None
0m-1.5m None Lawn	_	None Lawn			None Lawn
0m-1.5m None Lawn Cropped Land		None Lawn Cropped Land			None Lawn Cropped Land
0m-1.5m None Lawn		None Lawn			None Lawn
	Standing Water Interstitial Flow (se Interstitial Flow ture Type Defined Natural C Channelized Multi-Thread (>1 C No Defined Featu	ach ID (use map): 25 b)Watershed: Uppers Quarry ation: ON) w Condition ON) w Condition ON) w Surface Water (dry) Standing Water Interstitial Flow (subsurface water in ture Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) No Defined Feature	ach ID (use map): 25 Weat ach ID (use map): 25 Weat b)Watershed: Uppers Quarry (Thorold, ON) Raint ation: ON) Interstitian w Condition No Surface Water (dry) Image: Condition in the voids of a coarse w Condition No Surface Water (dry) Image: Condition in the voids of a coarse interstitial Flow (subsurface water in the voids of a coarse ture Type Defined Natural Channel Multi-Thread (>1 Channel) No Defined Feature	ach ID (use map): 25 ach ID (use map): 25 b)Watershed: Rainfall (72 hours prior): ation: Uppers Quarry (Thorold, ON) w Condition No Surface Water (dry) Surface Flow Minin Standing Water Surface Flow Subset Interstitial Flow (subsurface water in the voids of a coarse substrate) ture Type Defined Natural Channel Multi-Thread (>1 Channel) No Defined Feature Time: Wetland Interstitied Flow (>1 Channel)	Imme: 25 Weather (current): Weather (current): Weather (current): Weather (current): Weather (current): Rainfall (72 hours prior): Uppers Quarry (Thorold, ON) Weather (dry) Surface Flow Minimal Standing Water Interstitial Flow (subsurface water in the voids of a coarse substrate) Hure Type Defined Natural Channel Channelized Multi-Thread (>1 Channel) Weather (current): Surface Direct Comparison Surface Flow Minimal Online pond outlet Roadside Dirch

This feature was surveyed at the southwest corner of the property. It originates in a wetland that was dry during the survey. No defined banks were observed. Evidence of previous water

pooling observed and marked by a patch of cracked earth.





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tantec Consulting Ltd. 70 Southgate Drive, Suite 1, Guelph ON N1G 4P5

Photograph Log

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Project Name: Uppers Long Query Field Personnel: N. Sweet, M. Foillio

Date: Jule 22/17 Weather Conditions: (current)

Project Number: 160960948

230C

TEMP (°C)

PRECIPITATION

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3587-3688	FRATURE 13 -	- w/3, d/2 - d/V.
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check box if log i	s continued on rev	rerse side of this form



April 4, 2017 - Feature 1. Upstream location facing upstream of Uppers Lane (south) Photo 1:



Photo 2: April 4, 2017 - Feature 1. At Uppers Lane facing downstream (north)



April 4, 2017 - Feature 1. Downstream location at north Photo 3: property boundary facing downstream (north)



April 4, 2017 - Feature 1. Downstream location at north property boundary facing downstream (north) Photo 4:



April 4, 2017 - Feature 2. Upstream location facing upstream Photo 5: (south)



April 4, 2017 - Feature 2. Upstream location facing upstream Photo 6: (south)

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Photo 7: April 4, 2017 - Feature 2. Downstream location at north property boundary facing downstream (north)



Photo 8: April 4, 2017 - Feature 3. Upstream location facing upstream (east)



Photo 9: April 4, 2017 - Feature 3. Mid-section facing upstream (east)



Photo 10: April 4, 2017 - Feature 3. Downstream section at confluence with Feature 4.



Photo 11: April 4, 2017 - Feature 3. Downstream section.



Photo 12: April 4, 2017 - Feature 4. Upstream location facing upstream (southeast)

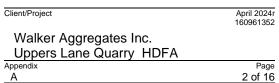






Photo 133: April 4, 2017 - Feature 4. Upstream location facing downstream (northwest)



Photo 15: April 4, 2017 - Feature 4. At downstream section facing downstream (northwest)



April 4, 2017 - Feature 4. Exposed tile drain. Facing downstream (northwest) at field crossover Photo 14:



April 4, 2017 - Feature 5. At upstream location facing downstream (west) Photo 16:



Photo 17: April 4, 2017 - Feature 5. Downstream location near main channel, facing downstream (west)



Photo 18: April 4, 2017 - Feature 5. Downstream location near main channel facing upstream (east)

Client/Project

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Walker Aggregates Inc. Uppers Lane Quarry HDFA Appendix 3 of 16 Title





Photo 19: April 4, 2017 - Feature 6. At upstream location



Photo 20: April 4, 2017 - Feature 6. At mid-section facing upstream (east)



Photo 21: April 4, 2017 - Feature 6. At downstream section facing upstream (east)



Photo 22: April 4, 2017 - Feature 7. At upstream section facing downstream (east)



Photo 23: April 4, 2017 - Feature 7. At Thorold Townline Road facing north



Photo 24: April 4, 2017 - Feature 7. At downstream section facing downstream (east)

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Photo 25: April 4, 2017 - Feature 8. At Thorold Townline Road.



Photo 26: April 4, 2017 - Feature 8. At upstream section facing downstream (east)



Photo 27: April 4, 2017 - Feature 8. At mid-section facing downstream (southeast)



Photo 28: April 4, 2017 - Feature 8. At confluence with main channel



Photo 29: April 4, 2017 - Feature 9. At upstream location facing upstream (northeast)



Photo 30: April 4, 2017 - Feature 9. At downstream location at confluence with main channel

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Photo 31: April 4, 2017 - Feature 9. At mid-section facing upstream (northwest)





Photo 33: April 4, 2017 - Feature 10. At upstream section facing upstream (west)



Photo 34: April 4, 2017 - Feature 10. At upstream section facing downstream (east)



Photo 35: April 4, 2017 - Feature 10. Downstream section facing upstream (west)



Photo 36: April 4, 2017 - Feature 11. At Thorold Townline Road

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Stantec



April 4, 2017 - Feature 11. Upstream section in woodlot facing downstream (east) Photo 37:



Photo 38: April 4, 2017 - Feature 11. Mid-section looking upstream (west) at woodlot



April 4, 2017 - Feature 12. At confluence with Feature 7 facing upstream (north) Photo 39:



Photo 40: April 4, 2017 - Feature 12. At mid-section



Photo 41: April 4, 2017 - Feature 12. At mid-section



April 4, 2017 - Feature 13. Immediately upstream of Uppers Lane facing upstream (south) Photo 42:

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April 4, 2017 - Feature 13. At upstream section facing Photo 43: downstream (north)



Photo 45: June 22, 2017 - Feature 1. At north property boundary facing downstream (north)



April 4, 2017 - Feature 13. At upstream section facing upstream (south) Photo 44:



Photo 46: June 22, 2017 - Feature 1. Facing north from Uppers Lane



Photo 47: June 22, 2017 - Feature 2. At north property boundary facing downstream (north)



Photo 48: June 22, 2017 - Feature 3. Mid-section facing east

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Photo 49: June 22, 2017 – Feature 4. Upstream section facing downstream (west)



Photo 51: June 22, 2017 - Feature 5. Mid-section



Photo 50: June 22, 2017 – Feature 4. Upstream section facing downstream (northwest)



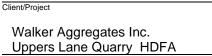
Photo 52: June 22, 2017 - Feature 7. At Thorold Townline Road



Photo 53: June 22, 2017 – Feature 7. At Thorold Townline Road, looking east



Photo 54: June 22, 2017 – Feature 8. Main channel area looking upstream (west) at feature location



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Photo 55: June 22, 2017 – Feature 8. At Thorold Townline Road facing downstream (east)



Photo 57: June 22, 2017 – Feature 10. Looking at east side of Thorold Townline Road facing upstream (west)



Photo 56: June 22, 2017 - Feature 9. Mid-section facing north



Photo 58: June 22, 2017 – Feature 10. At Thorold Townline Road facing downstream (east)



Photo 59: June 22, 2017 – Feature 11. Mid-section facing upstream (west) into woodlot



Photo 60: June 22, 2017 – Feature 11. Mid-section facing downstream (east)

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Photo 61: June 22, 2017 – Feature 13. At Uppers Lane facing upstream (south) of road



Photo 63: April 9, 2021 - Feature 14. Facing upstream (east)



Photo 62: June 22, 2017 – Feature 13. At Uppers Lane facing downstream (north) of road



Photo 64: April 9, 2021 – Feature 14. Feature 14. Looking upstream (east) from edge of field near main channel



Photo 65: April 9, 2021 - Feature 14 looking west near main channel.



Photo 66: April 9, 2021 – Feature 15, which is upstream end of Feature 16, facing east.

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Photo 67: April 9, 2021 - Feature 15 end Facing upstream (west)



Photo 68: April 9, 2021 – Feature 16. Downstream section facing upstream (west)



Photo 69: April 9, 2021 – Feature 16. Upstream section facing downstream (east)



Photo 70: April 9, 2021 - Feature 16. At confluence with Feature 1



Photo 71: April 9, 2021 – Feature 17. Looking downstream at Uppers Lane from south of road



Photo 72: April 9, 2021 – Feature 17. Approximately 100 m downstream (west) of Beechwood Road, facing downstream (north)

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Photo 73: April 9, 2021 - Feature 17. At middle section facing upstream (south)



Photo 75: April 9, 2021 – Feature 18. At upstream location facing downstream (south)



Photo 74: April 9, 2021 - Feature 18. At confluence with Feature 3 facing upstream (north)



Photo 76: April 9, 2021 - Feature 18. Uppers Lane culvert



Photo 77: April 9, 2021 - Feature 19. At downstream location facing upstream (east)



Photo 78: April 9, 2021 - Feature 19. At mid-section facing upstream (east)

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Photo 79: April 9, 2021 - Feature 19. At upstream location facing upstream (east)



Photo 80: April 9, 2021 - Feature 20. At upstream location facing east



Photo 81: April 9, 2021 - Feature 20. At upstream location facing west



Photo 82: April 9, 2021 – Feature 20. Downstream end looking east at main channel



Photo 83: April 9, 2021 - Feature 21. At downstream section facing west



Photo 84: April 9, 2021 – Feature 21. Facing east towards confluence with Feature 20

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Photo 85: April 9, 2021 - Feature 21. Facing upstream (southwest)



Photo 86: April 9, 2021 – Feature 22. At downstream section near main channel, facing upstream (west)



Photo 87: April 9, 2021 - Feature 22. Facing upstream (northwest)



Photo 88: April 9, 2021 – Feature 22. At downstream section looking down stream (east) at main channel



Photo 89: April 9, 2021 – Feature 23. Upstream (west) side of Thorold Townline Road



Photo 90: April 9, 2021 – Feature 23. Looking upstream (west) of Thorold Townline Road

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Photo 91: April 9, 2021 – Feature 24. From Thorold Townline Road, facing downstream (northeast)



Photo 93: April 9, 2021 – Feature 24. At middle section facing downstream (northeast)



Photo 95: April 9, 2021 – Feature 25. Downstream section looking upstream (south)



Photo 92: April 9, 2021 – Feature 24. At upstream section looking upstream (southwest) at Thorold Townline Road



Photo 94: April 9, 2021 – Feature 25. At downstream location looking east across)



Photo 96: April 9, 2021 - Feature 25. Upstream (south) end.

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